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EXAMINER	
ZERVIGON, RUDY	
ART UNIT	**PAPER NUMBER**
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/790,180	ARAI ET AL.	
	Examiner	Art Unit	
	Rudy Zervigon	1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 May 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *5,8,9 and 11-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *5,8,9 and 11-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *4/8/2008*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 5, 11, 12, 14, 16, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsukazaki; Hisashi et al. (US 5837094 A) in view of Gupta; Anand et al. (US 6125789 A), Hamelin; Thomas et al. (US 6951821 B2) and Nakano, Hiroyuki et al. (US 20010016430 A1). Tsukazaki teaches an apparatus (Figure 3; column 8, lines 10-67) for processing a sample (1, Figure 3; column 8, lines 10-67), comprising: a processing chamber (4,12, Figure 3; column 8, lines 10-67) provided with a platform (2, Figure 3) on which the sample (1, Figure 3; column 8, lines 10-67) is placed, the processing chamber (4,12, Figure 3; column 8, lines 10-67) being provided with a measurement window (15d, Figure 3; column 1, lines 44-59) formed on a wall of the processing chamber (12, Figure 3; column 8, lines 10-67); exhaustion means ("booster pump"; column 6, lines 6-11) for exhausting inside of the processing chamber (4,12, Figure 3; column 8, lines 10-67) via an exhaust port (conduit 12; Figure 3) of the processing chamber (4,12, Figure 3; column 8, lines 10-67) a gas injector (7, Figure 3; column 8, lines 10-67) for injecting a gas into the processing chamber (4,12, Figure 3; column 8, lines 10-67); a plasma generator (not shown; column 2, lines 27-36) for generating plasma in the processing chamber (4,12, Figure 3; column 8, lines 10-67) after the gas has been injected into the processing chamber (4,12, Figure 3; column 8, lines 10-67) by the use of the gas injector (7, Figure 3; column 8, lines 10-67) – claim 5

Tsukazaki further teaches:

i. Tsukazaki's particle detector unit (15, Figure 3; column 1, lines 44-59) installed outside of the processing chamber (4,12, Figure 3; column 8, lines 10-67) detecting light which is scattered from particles (column 3; lines 1-8) passing though the plane while the laser (15a, Figure 3; column 1, lines 44-59) beam passes in the plane and which passes through the measurement window (15d, Figure 3; column 1, lines 44-59); wherein the measurement window (15d, Figure 3; column 1, lines 44-59) is installed on the wall of the processing chamber (12, Figure 3; column 8, lines 10-67) proximate to the exhaust port (conduit 12) and outside of a plasma generation region (above 1) so as to prevent the measurement window (15d, Figure 3; column 1, lines 44-59) from deterioration in detection sensitivity of the light scattered from the particles inside of the processing chamber (12, Figure 3; column 8, lines 10-67), the laser (15a, Figure 3; column 1, lines 44-59) introducing a laser from outside of the processing chamber (4,12, Figure 3; column 8, lines 10-67) to inside of the processing chamber (4,12, Figure 3; column 8, lines 10-67) through the measurement window (15d, Figure 3; column 1, lines 44-59); Tsukazaki's particle detector unit (15, Figure 3; column 1, lines 44-59) monitors the light scattered from the particle crossing the plane of the processing window (15c; Figure 3; column 1, lines 44-59) and passing outside of the processing chamber (4,12, Figure 3; column 8, lines 10-67) through the measurement window (15d, Figure 3; column 1, lines 44-59) - claim 5

ii. The apparatus of claim 5, wherein the exhaustion means (12; Figure 3 – see above) enables evacuation of the processing chamber (4,12, Figure 3; column 8, lines 10-67), and the plasma generator generates the plasma after the processing chamber (4,12, Figure 3; column 8, lines 10-67) has been evacuated, as claimed by claim 11 – Applicant's claim requirement of "and the plasma is generated after the processing chamber has been evacuated" is a claim

requirement of intended use in the pending apparatus claims. Further, it has been held that claim language that simply specifies an intended use or field of use for the invention generally will not limit the scope of a claim (Walter , 618 F.2d at 769, 205 USPQ at 409; MPEP 2106). Additionally, in apparatus claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim (In re Casey,152 USPQ 235 (CCPA 1967); In re Otto , 136 USPQ 458, 459 (CCPA 1963); MPEP2111.02).

iii. The apparatus (Figure 3; column 8, lines 10-67) according to claim 5, wherein the laser (15a, Figure 3; column 1, lines 44-59) and the detector (15, Figure 3; column 1, lines 44-59) are arranged at a substantially same position outside of the processing chamber (4,12, Figure 3; column 8, lines 10-67) with respect to the measurement window (15d, Figure 3; column 1, lines 44-59) – claim 12

iv. The apparatus (Figure 3; column 8, lines 10-67) according to claim 5, wherein the plane in which the laser (15a, Figure 3; column 1, lines 44-59) beam is scanned inside of the processing chamber (4,12, Figure 3; column 8, lines 10-67) is disposed substantially outside of a region (above 1) where the plasma is generated inside of the processing chamber (4,12, Figure 3; column 8, lines 10-67), as claimed by claim 16

Tsukazaki further teaches that Tsukazaki's particle detector (15, Figure 3; column 1, lines 44-59) transmits a laser (15a, Figure 3; column 1, lines 44-59) beam in a plane inside of the processing chamber (4,12, Figure 3; column 8, lines 10-67) which extends in a direction

orthogonal to a direction of exhaust flow within the processing chamber to the exhaust port (conduit 12) - claim 5

Tsukazaki does not teach:

i. Tsukazaki's particle detector (15, Figure 3; column 1, lines 44-59) *scans* a laser (15a, Figure 3; column 1, lines 44-59) beam in a plane inside of the processing chamber (4,12, Figure 3; column 8, lines 10-67) - claims 5

ii. exhaustion means ("booster pump"; column 6, lines 6-11) for exhausting the processing chamber (4,12, Figure 3; column 8, lines 10-67) by a turbo-molecular pump through an exhaust passage coupled to the exhaust port – claim 5

iii. Tsukazaki's measurement window (15d, Figure 3; column 1, lines 44-59) has a reflection prevention film coating, as claimed by claim 5.

iv. Likewise, Tsukazaki further does not teach wherein the reflection prevention film is coated on an outside surface of the measurement window (15d, Figure 3; column 1, lines 44-59) upon which the laser (15a, Figure 3; column 1, lines 44-59) is incident from outside of the processing chamber (4,12, Figure 3; column 8, lines 10-67), as claimed by claim 14.

v. The apparatus (Figure 3; column 8, lines 10-67) according to claim 5, wherein the exhaust passage is equipped with a butterfly valve, as claimed by claim 17.

Gupta teaches a similar apparatus (Figure 1B, 3B) including a scanning (335; Figure 3B) laser system (330, 335; column 8; line 41 – column 9, line 23) for particle detection and processing.

Hamelin teaches a wafer processing system/unit (Figure 2,3) including a vacuum pumping system/unit (280; Figure 2) comprising a mechanical booster vacuum pump, or, equivalently, a turbo-molecular vacuum pump (TMP Figures 2,3; column 9, line 60 – column 10, line 4).

Hamelin further teaches a butterfly valve (not shown; column 9, line 60 – column 10, line 4) constituting his vacuum pumping system/unit (280; Figure 2; column 9, line 60 – column 10, line 4).

Nakano teaches a similar substrate processing apparatus (Figure 10) including Nakano's measurement window (11, Figure 10; [0096]) with a reflection prevention film coating that functions to minimize laser reflection, polarization, and entry angle of the incoming laser as taught by Nakano ([0096]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add Gupta's laser scanner (335; Figure 3B) to Tsukazaki's particle detector (15, Figure 3; column 1, lines 44-59), and for Tsukazaki to replace his exhaustion means ("booster pump"; column 6, lines 6-11) with Hamelin's exhaustion means (280; Figure 2).

Further, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add Nakano's measurement window (11, Figure 10; [0096]) reflection prevention film coating to Gupta's measurement window (15d, Figure 3; column 1, lines 44-59).

Motivation to add Gupta's laser scanner (335; Figure 3B) to Tsukazaki's particle detector (15, Figure 3; column 1, lines 44-59) is for detecting particles in a concentrated "volume" as taught by Gupta (column 8; lines 26-40), motivation for Tsukazaki to replace his exhaustion means ("booster pump"; column 6, lines 6-11) with Hamelin's exhaustion means (280; Figure 2) is for

conducting processing applications that are "low pressure" as taught by Hamelin (column 9; lines 65-68).

Motivation to add Nakano's measurement window (11, Figure 10; [0096]) reflection prevention film coating to Gupta's measurement window (15d, Figure 3; column 1, lines 44-59) is for minimizing laser reflection, polarization, and entry angle of the incoming laser as taught by Nakano ([0096]).

3. Claims 8, 9, 13, 15, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsukazaki; Hisashi et al. (US 5837094 A) in view of Gupta; Anand et al. (US 6125789 A) and Nakano, Hiroyuki et al. (US 20010016430 A1). Tsukazaki and Gupta are discussed above.

Tsukazaki further teaches a plasma processing unit (Figure 3; column 8, lines 10-67) including a chamber (4,12, Figure 3; column 8, lines 10-67), a plate (2; Figure 3) on which a sample (1, Figure 3; column 8, lines 10-67) is placed, a plasma generator (not shown; column 2, lines 27-36), an exhaustion pump ("booster pump"; column 6, lines 6-11) for exhausting inside of the chamber (12, Figure 3; column 8, lines 10-67) through an exhaust port (conduit 12) of the chamber (12, Figure 3; column 8, lines 10-67), and a measurement window (15d, Figure 3; column 1, lines 44-59) formed on a wall of the chamber (12, Figure 3; column 8, lines 10-67), the processing unit (Figure 3) being used for processing the sample placed on the plate with plasma generated by the plasma generator (not shown; column 2, lines 27-36) inside of the chamber (12, Figure 3; column 8, lines 10-67) – claim 8.

Tsukazaki further teaches:

i. Tsukazaki's particle detector unit (15, Figure 3; column 1, lines 44-59) installed outside of the processing chamber (4,12, Figure 3; column 8, lines 10-67) detecting light which is scattered

from a particle (column 3; lines 1-8), the laser (15a, Figure 3; column 1, lines 44-59) introducing a laser from outside of the processing chamber (4,12, Figure 3; column 8, lines 10-67) to inside of the processing chamber (4,12, Figure 3; column 8, lines 10-67) through the measurement window (15d, Figure 3; column 1, lines 44-59); Tsukazaki's particle detector unit (15, Figure 3; column 1, lines 44-59) monitors the light scattered from the particle crossing the plane of the processing window (15c; Figure 3; column 1, lines 44-59) and passing outside of the processing chamber (4,12, Figure 3; column 8, lines 10-67) through the measurement window (15d, Figure 3; column 1, lines 44-59) - claim 8

ii. A plasma processing apparatus (Figure 3; column 8, lines 10-67) control system (31, Figure 3) comprising: a plasma processing unit (Figure 3; column 8, lines 10-67) including a chamber (4,12, Figure 3; column 8, lines 10-67), a plate (2, Figure 3) on which a sample (1, Figure 3; column 8, lines 10-67) is placed, a plasma generator (not shown; column 2, lines 27-36), and a measurement window (15d, Figure 3; column 1, lines 44-59) formed on a wall (12, Figure 3; column 8, lines 10-67) of the chamber (4,12, Figure 3; column 8, lines 10-67), the processing unit (Figure 3; column 8, lines 10-67) being used for processing the sample (1, Figure 3; column 8, lines 10-67) placed on the plate (2, Figure 3) with the plasma generated by the plasma generator (not shown; column 2, lines 27-36) inside the chamber (4,12, Figure 3; column 8, lines 10-67); and a controller unit (31, Figure 3) for receiving a signal output from the processing unit (Figure 3; column 8, lines 10-67) and a detection signal from the particle detecting unit (15, Figure 3; column 1, lines 44-59) to control the processing unit (Figure 3; column 8, lines 10-67) and to monitor a state of contaminants inside the chamber (column 7; lines 31-67) - claim 8

iii. Tsukazaki's measurement window (15d, Figure 3; column 1, lines 44-59) which is installed on the wall of the chamber (4,12, Figure 3; column 8, lines 10-67) proximate to the exhaust port (conduit 12) and outside of a region (above 1) where the plasma is generated by the plasma generator (not shown; column 2, lines 27-36) to prevent the measurement window (15d, Figure 3; column 1, lines 44-59) from deterioration in detection sensitivity of the light scattered from the particles inside of the processing chamber (4,12, Figure 3; column 8, lines 10-67) – claim 8. When the structure recited in the reference is substantially identical to that of the claims, claimed properties or functions are presumed to be inherent (In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977); MPEP 2112.01).

iv. The plasma processing apparatus (Figure 3; column 8, lines 10-67) according to claim 8, wherein the controlling unit (31, Figure 3) compares the output signal ("end point"; column 5, lines 56-64; column 7, lines 31-40) from the processing unit (Figure 3; column 8, lines 10-67) with the detection signal by the particle detecting unit (15, Figure 3; column 1, lines 44-59) to identify a contaminant source (column 7; lines 31-67) in the processing apparatus (Figure 3; column 8, lines 10-67), as claimed by claim 9

v. The plasma processing apparatus (Figure 3; column 8, lines 10-67) according to claim 8, wherein the particle detecting unit (15, Figure 3; column 1, lines 44-59) includes a laser (15a, Figure 3; column 1, lines 44-59) introduce the laser beam and a detector which which detects the scattered light and which are arranged at a substantially same position outside of the processing chamber (4,12, Figure 3; column 8, lines 10-67) with respect to the measurement window (15d, Figure 3; column 1, lines 44-59) – claim 13

Tsukazaki further teaches that Tsukazaki's particle detector (15, Figure 3; column 1, lines 44-59) transmitts a laser (15a, Figure 3; column 1, lines 44-59) beam in a plane which extends in a direction which is orthogonal to an exhaust flow direction (along conduit 12) inside of the chamber (4,12, Figure 3; column 8, lines 10-67) to the exhaust port - claims 8, 13

Tsukazaki does not teach

i. Tsukazaki's particle detector (15, Figure 3; column 1, lines 44-59) scans a laser (15a, Figure 3; column 1, lines 44-59) beam - claims 8, 13

ii. the plasma processing apparatus according to claim 18, wherein the reflection prevention film is coated on an outside surface of the measurement window (15d, Figure 3; column 1, lines 44-59) upon which the laser (15a, Figure 3; column 1, lines 44-59) is incident from outside of the processing chamber (12, Figure 3; column 8, lines 10-67), as claimed by claim 15

iii. The plasma processing apparatus (Figure 3; column 8, lines 10-67) according to claim 8, wherein the measurement window (15d, Figure 3; column 1, lines 44-59) has a reflection prevention film coated thereon, as claimed by claim 18

iv. The plasma processing apparatus (Figure 3; column 8, lines 10-67) according to claim 8, wherein the plane in which the laser (15a, Figure 3; column 1, lines 44-59) beam is applied is inside of the chamber (4,12, Figure 3; column 8, lines 10-67) is substantially outside of a region (above 1) where the plasma is generated inside of the chamber (4,12, Figure 3; column 8, lines 10-67) – claim 19

Gupta teaches a similar apparatus (Figure 1B, 3B) including a scanning (335; Figure 3B) laser system (330, 335; column 8; line 41 – column 9, line 23) for particle detection and processing.

Nakano teaches a similar substrate processing apparatus (Figure 10) including Nakano's measurement window (11, Figure 10; [0096]) with a reflection prevention film coating that functions to minimize laser reflection, polarization, and entry angle of the incoming laser as taught by Nakano ([0096]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add Gupta's laser scanner (335; Figure 3B) to Tsukazaki's particle detector (15, Figure 3; column 1, lines 44-59).

Motivation to add Gupta's laser scanner (335; Figure 3B) to Tsukazaki's particle detector (15, Figure 3; column 1, lines 44-59) is for detecting particles in a concentrated "volume" as taught by Gupta (column 8; lines 26-40).

Further, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add Nakano's measurement window (11, Figure 10; [0096]) reflection prevention film coating to Gupta's measurement window (15d, Figure 3; column 1, lines 44-59).

Motivation to add Nakano's measurement window (11, Figure 10; [0096]) reflection prevention film coating to Gupta's measurement window (15d, Figure 3; column 1, lines 44-59) is for minimizing laser reflection, polarization, and entry angle of the incoming laser as taught by Nakano ([0096]).

Response to Arguments

4. Applicant's arguments filed May 5, 2008 have been fully considered but they are not persuasive.

5. Applicant states:

“

In addition to these recognized deficiencies of Tsukazaki et al, applicants submit that Tsukazaki et al provides no disclosure or teaching of scanning a laser beam in a plane which extends orthoqonal to an exhaust flow direction to the exhaust port and inside of the processing chamber, nor that a measurement window is installed in a wall of the processing chamber proximate to the exhaust port and outside of a reqion where the plasma is generated by the plasma generator to prevent the measurement window from deterioration in detection sensitivity of the light scattered from the particles inside of the processing chamber, as now recited in claims 5 and 8.

“

In response, the Examiner only agrees with Applicant’s statement that Tsukazaki’s laser is not a “scanning” laser as claimed. The remaining positions above are expressly taught by Tsukazaki as detailed by the Examiner’s above-rejections.

Applicant further states:

“

With respect to Gupta et al, while this patent discloses scanning of a laser beam within a processing chamber, as described in column 5, lines 39 - 57 of Gupta et al, "gases are exhausted through an annular, base slot-shaped orifice 16 surrounding the reaction region and into a annular exhaust plenum 17". (emphasis added). Assuming that the annular slot 16 represents an exhaust port of the chamber in Gupta et al, it is readily apparent that the plane of laser scanning in Gupta et al extends in a direction parallel to the direction of exhaust flow and not in a direction which is orthogonal to exhaust flow direction, as recited in claims 5 and 8 and dependent claims of this application. Thus, irrespective of the Examiner's contentions concerning

the obviousness of the combination of Gupta et al and Tsukazaki et al, applicants submit that such references, taken alone, or in combination…

“

And…

“

As to Nakano et al, assuming arguendo that Nakano et al discloses a reflection prevention film coating on a measurement window, Nakano et al is directed to scanning a laser beam to measure particles suspended in the plasma, as illustrated in Fig. 6, and does not disclose or teach the recited features of claims 5 and 8 of scanning the laser in a plane inside of the processing chamber which extends in a direction orthogonal to a direction of exhaust flow within the processing chamber to the exhaust port so as to detect light which is scattered from particles passing through the plane. Additionally, Nakano et al does not disclose the location of the measurement window in the manner set forth in the claims so as to prevent the measurement window from deterioration in detection sensitivity of the light scattered from the particles inside of the processing chamber. Thus, applicants submit that Nakano et al, taken alone, or in combination with the other cited art…

“

And..

“

With respect to Hamelin et al, whether or not Hamelin et al discloses a butterfly valve, Hamelin et al also fails to disclose or teach scanning of a laser in a plane which extends in a direction orthogonal to an exhaust flow direction to the exhaust port in the processing chamber and

detecting light scattered from particles passing through the plane. Additionally, Hamelin et al also fails to provide any disclosure or teaching concerning the measurement window arranged in the manner set forth. Thus, applicants submit that Hamelin et al, taken alone or in combination with any of the other cited art, fails to provide the claimed features of claims 5 and 8 and the dependent claims of this application.

"

6. In response to applicant's arguments (pages 8-10) against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Applicants are directed to the above new grounds of rejection where the Examiner specifically cites where in the prior art Applicant's amended claim limitations are believed to be met.

Conclusion

7. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inguiry concerning this communication or earlier communications from the examiner should be directed to Examiner Rudy Zervigon whose telephone number is (571) 272-1442. The examiner can normally be reached on a Monday through Friday schedule from 9am through 5pm. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Any Inguiry of a general nature or relating to the status of this application or proceeding should be directed to the Chemical and Materials Engineering art unit receptionist at (571) 272-1700. If the examiner can not be reached please contact the examiner's supervisor, Parviz Hassanzadeh, at (571) 272- 1435

/Rudy Zervigon/

Primary Examiner, Art Unit 1792